FINDING OF NO SIGNIFICANT IMPACT
AND DECISION RECORD
EA-NM-060-2003-052

DECISION: It is my decision to authorize the Application For Permit To Drill Or Deepen (APD), for the Bobwhite "BBH" Deep Federal Com. #1 gas well, submitted by Yates Petroleum Corporation. The provisions for the approval of the APD will include the attachment of the Roswell Field Office requirements as defined in the following exhibits; **Exhibit A** - Location Map, **Exhibit B** - Well Drilling Requirements, **Exhibit C** & Floodplain "V" Shaped Barrier Diagram - **Exhibit G** - Conditions of Approval, **Exhibit D** - Permanent Resource Road Requirements, Cattleguard Diagram A & B - **Exhibit E**, & Diagrams For Proper Culvert Installation - **Exhibit F**, and any special mitigating measures developed in the environmental assessment.

In the event the well proves to be a dry hole, or when the well is abandoned, I recommend that reclamation requirements be attached to the well abandonment, including additional requirements imperative for the complete reclamation of the disturbed areas. These actions are subject to 43 CFR 3160 regulations for Onshore Oil and Gas operations on federal lease NM-109419.

Authority for these actions is the Mineral Leasing Act of February 25, 1920, as amended.

These actions will affect public land described as:

New Mexico Principal Meridian

Section 3; Lot D, T. 6 S., R. 26 E.
660' FSL & 750' FWL

FINDING OF NO SIGNIFICANT IMPACT: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined that impacts resulting from the proposed actions are not expected to be significant and an environmental impact statement is not required.

RATIONALE FOR DECISION: The proposed actions would not result in any undue or unnecessary environmental degradation. Portions of the subject lands and adjacent lands have been used for similar purposes and all present and potential uses and users have been considered.

COMPLIANCE AND MONITORING: The construction phase of the proposed actions and subsequent operational phases will be monitored as per regulations.

/s/Larry D. Bray 3/3/03

Larry D. Bray, Assistant Field Manager, Lands and Minerals **Date**

ENVIRONMENTAL ASSESSMENT

EA# NM-060-03-52

WELL NAME & NO.: Bobwhite "BBH" Deep Federal Com. #1
BLM Serial #: NM-109419

Section 3, T. 6 S., R. 26 E., NMPM,
660' FSL & 750' FWL, Unit Letter D

Chaves County, New Mexico

OPERATOR: Yates Petroleum Corporation

ACTION: Application for Permit to Drill was submitted by Electronic Commerce.

SURFACE/MINERAL ESTATE: Federal - Federal Minerals/Surface

I. Introduction

A. Need for the Proposed Action:

Yates Petroleum Corporation proposes to drill and complete a natural gas well at the location described above. The proposed action is needed to develop the mineral lease. If completed as proposed, the well would be produced under a communitization agreement that would include a portion of the lease.

B. Conformance with Land Use Plan:

Oil and gas lease development is in conformance with the Roswell Approved Resource Management Plan and Record of Decision, October 1997.

C. Relationship to Statutes, Regulations, or other Plans:

The proposed action does not conflict with any known State or local planning, ordinance or zoning.

II. Proposed Action and Alternatives

A. Proposed Action:

Yates Petroleum Corporation submitted an Application for Permit to Drill on 1/28/03, to drill the Bobwhite "BBH" Deep Federal Com. #1gas well.

The proposed action would include:

1. The proposed road is approximately 17,100 feet in length, beginning from the Aztec County road to the proposed well pad. Of the 17,100 feet, approximately 15,100 feet is existing road and 2,000 feet is new access road construction, and about 6,000 feet of road would cross public land. The road would have a driving surface (travelway) of 14 feet, with a maximum 30-foot wide surface disturbance area for the road construction. The proposed access road would be constructed and maintained in accordance with the New Mexico Road Policy.

The construction of approximately 2,000 feet of new access road would begin from an existing road

and would access the southeast corner of the proposed well pad. All other existing access roads would be maintained in as good or better condition than were existing at the commencement of operations.

2. The construction of the proposed well pad would be 325 feet long by 185 feet wide (plus 75' X 125'). The construction of the reserve pit would be about 150 feet by 175 feet and dug 4 feet below ground level. The reserve pit would be located on the north side of the well pad. Standard oilfield construction equipment consisting of; track-type tractors, motor graders, dump trucks, and water trucks would be used to construct the access road and well pad. A rotary drilling rig would be used to drill the well to a depth of 5480 feet. Associated production facilities (e.g., pipeline, separator, storage tanks, etc.) would be installed during the production phase of this well. Topsoil would be stockpiled for future use over the disturbed areas.

3. Surfacing material (caliche/gravel) needed for the construction of the access road and well pad could be obtained by the operator from a federal pit in the SW¼SE¼ of Section 16 - T. 6 S. - R. 26 E., Chaves County, New Mexico.

B. Alternatives:

1. Relocate the Proposed Action:

The well location is determined on the basis of subsurface geologic information and to some extent, by spacing regulations imposed by the New Mexico Oil Conservation District II. No other alternative location would have significantly fewer impacts than, or have a clear advantage over, the proposed location. Therefore, the alternative of changing the location involved in this action is not analyzed further in this EA.

2. No Action:

Under this alternative, the application would be rejected. None of the environmental impacts associated with the proposed action or alternate location would occur. Additionally, economic benefits of the proposed action would not be realized, and the existing environment, including the developments in place, would remain unchanged.

III. Description of the Affected Environment

A. General Setting:

The proposed access road and well pad are located on federal minerals and surface, about 32 miles NE of Roswell, N.M. Historical and present use of the subject land has been limited to livestock grazing and energy development.

B. Rights of Record:

An inspection of the Master Title Plats and other Bureau records revealed the following title information pertaining to valid existing prior rights on the subject land:

- Oil and gas leases: NM-109419 - covers lease actions.
- No federally administered rights-of-way would be affected in the project area.
- No mining claims are recorded within Sec. 3, T. 6 S., R. 26 E., NMPM.

C. Affected Resources:

The following critical resources have been evaluated and are either not present or are not affected by the proposed action or the alternatives in this EA:

Areas of Critical Environmental Concern (ACEC's)
Cultural Resources (84 – R – 125 –R)
Farmlands, Prime/Unique
Native American Religious Concerns
Wastes, Hazardous/Solid
Wild & Scenic Rivers
Wilderness

Floodplains **[Hydrologist's Input]**, Wetlands and Riparian Zones **[Wildlife Biologist's Input]**, are the critical resources which are present with this proposed action. The proposed access road and well pad are situated on a floodplain just adjacent to the Pecos River. Streams, Rivers and Floodplains stipulations/requirements are included in Appendix 1. entitled: Surface Use and Occupancy Requirements of the Roswell Approved Resource Management Plan and Record of Decision dated 1997. Floodplains stipulations/requirements are included in Appendix 2., entitled: ROSWELL DISTRICT CONDITIONS OF APPROVAL of the Roswell Approved Resource Management Plan and Record of Decision Dated 1997.

1. Air Quality:

The area of the proposed action is considered a Class II air quality area. A Class II area allows moderate amounts air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed soils and exhaust emissions from motorized equipment.

2. Soils:

The ***Soil Survey of Chaves County, New Mexico, Northern Part (USDA Soil Conservation Service 1980)*** was used to describe and analyze impacts to soils from the proposed action. The soil map units represented in the project area are:

Blakeney-Ratliff association, 0 to 5 percent slopes (BRB) Permeability of the unit soil is moderately rapid. Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

Faskin-Roswell complex, o to 5 percent slopes (FRB) Permeability of the unit soil is moderate. Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

3. Floodplains

The well pad and access road location is located in the 100-year floodplain of the Pecos River floodplain (See Exhibit A-2). The well pad and access road location is located in Zone A or "Area of the 100-year flood". The floodplain ranges in width from less than one-quarter mile to more than one mile in the area. Channel banks are generally stable, but are actively being cut in some locations. This is most likely due to entrenchment of the channel rather than disturbance associated with land use activities. The channel material is primarily a sand and gravel bed with small cobbles and silt. The stream gradient is relatively flat (0.25 percent).

For administrative purposes, the 100_year floodplain serves as the basis for floodplain management on public lands. It is based on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (1983). Current development on the floodplain consists of two-track roads and several miles of

boundary fence in the area. There are several private oil or gas developments in the floodplain in the area.

4. Wetlands/Riparian Zones

Riparian areas can be found along the 3.3 miles of the Pecos River (1.5 miles of public land) on the allotment. Within the floodplain, the riparian vegetation community is tied to landform and is influenced by flooding intervals. The land form is comprised of exposed and stabilized river bars, the floodplain, and terraces. The river channel is moderately entrenched so that bank form varies from shallow in the older meander deposition areas to vertical where the river has cut into the upper terrace.

Riparian vegetation grows more abundantly on the old point bars and shallow banks, and may or may not be found as narrow strips of green at the base of the more vertical banks. The width of the riparian area is fairly narrow. Saltcedar, an exotic species introduced for bank protection and flood control throughout the West, has invaded about 250 acres of public land within the active floodplain and riparian areas along the river, growing in patches, strips or in dense thickets. Flow regulation of the Pecos River has contributed to the entrenchment and lack of lateral movement of the river, and the lack of flooding events needed for riparian plant regeneration but favoring saltcedar invasion.

Riparian vegetation include Baltic rush, threesquare and cattail. Woody vegetation within the lower floodplain include seepwillow, coyote willow, saltcedar, cottonwood and Russian olive. Alkali sacaton, alkali muhly, and inland saltgrass are the most common grass species. Common forb species include goldenrod, ragweed, Douglas rabbitbrush, prairie sunflower, and white sweetclover. Older floodplain terraces support about 26 acres of cottonwood trees with open canopies. Adjacent upland vegetation is also found within the floodplain.

5. Vegetation: GRASSLAND COMMUNITY

This lease is within the grassland vegetative community as identified in the Roswell Resource Management Plan/Environmental Impact Statement (RMP/EIS). Appendix 11 of the Draft RMP/EIS describes the Desired Plant Community (DPC) concept and identifies the components of each community. The distinguishing feature for the grassland community is that grass species typically comprise 75% or more of the potential plant community. The potential grass community is comprised of Alkali and Giant Sacaton *(Sporobolus airoides),*and *(Sporobolus giganteus)* respectively. Vine mesquite *(Panicum obtusum),* blue grama *(Bouteloua gracilis),* little bluestem *(Schizacyrium scoparium)* and sideoats grama *(Bouteloua curtipendula)* also are grass species found in this plant community. The community also includes shrub species such as mesquite *(Prosopis glandulosa)*, which readily invades the area as the community deteriorates. Broom snakeweed *(Gutierrezia sarothrae)* and yucca (*Yucca* spp.) are also found but in lesser quantities. Also associated with this floodplain area is riparian vegetation such as cottonwood *(Populus* spp.) and saltcedar *(Tamarix ramossisima),* which also invades bottomland sites.

The Ecological Site Description for the proposed well pad and access road is (SD-3 bottomland).

6. Invasive & Noxious Weeds:

There are no known populations of invasive or noxious weed species on the road to the proposed access road and well pad.

Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Noxious weeds cause estimated losses to producers $2 to $3 billion annually. These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from

noxious weeds; (2) decreased quantity of agricultural products due to noxious weed infestations; and (3) costs to control and/or prevent the noxious weeds.

Further, noxious weeds can negatively affect livestock and dairy producers by making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing producers' feed costs and animal health care costs. Increased costs to operators are eventually borne by consumers.

Noxious weeds also affect recreational uses and reduces realty values of both the directly influenced and adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control prevention is not exercised.

7. Ground Water Quality :

Fresh water for stock and irrigation use is obtained from the Quaternary Alluviums. Fresh water for stock and domestic use is obtained from the Artesia Group. Depths for fresh water range from 8' to 250'. Additionally, the well location is near the fresh/saline water interface of the San Andres Formation and because of this there is a possibility of fresh water down to a depth range of 900' to 950'. The deepest expected fresh water is down to approximately 900 subsurface feet.

8. Wildlife:

The allotment provides a variety of habitat types for terrestrial and aquatic wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of open water, the numerous drainages interconnecting upland habitats to the Pecos floodplain, a mixture of grassland habitat and mixed desert shrub vegetation, and riparian vegetation found within the floodplain of the river.

Numerous avian species use the Pecos River during spring and fall migration, including nongame migratory birds. The Bitter Lake National Wildlife Refuge (BLNWR) is several miles downstream from the allotment, and serves as a major focal point for migratory birds (e.g., ducks, geese, sandhill cranes, waterbirds). Common bird species are mourning dove, mockingbird, white-crowned sparrow, black-throated sparrow, blue grosbeak, northern oriole, western meadowlark, Crissal thrasher, western kingbird, northern flicker, common nighthawk, loggerhead shrike, and roadrunner. Raptors include northern harrier, Swainson's hawk, American kestrel, and occasionally golden eagle and ferruginous hawk.

The Pecos River once supported a wide variety of native fish species adapted to the flow regime that existed prior to dam construction, agriculture development, and the introduction of non-native fish species. The greatest impact to fish habitat is the manipulation of water supply to meet irrigation needs. Representative fish species include the red shiner, sand shiner, Arkansas River shiner, Pecos bluntnose shiner, plains minnow, silvery minnow, plains killifish, mosquitofish, speckled chub, river carpsucker and channel catfish.

Common mammal species using the area include mule deer, pronghorn antelope, coyote, gray fox, bobcat, striped skunk, porcupine, racoon, badger, jackrabbit, cottontail, white-footed mouse, deer mouse, grasshopper mouse, kangaroo rat, spotted ground squirrel, and woodrat.

A variety of herptiles also occur in the area such as yellow mud turtle, box turtle, eastern fence lizard, side-blotched lizard, horned lizard, whiptail, hognose snake, coachwhip, gopher snake, rattlesnake, and spadefoot toad.

Threatened or Endangered Species: The Pecos bluntnose shiner, Pecos gambusia, interior least tern and the Pecos sunflower are federally listed species that occur or have the potential to occur on the allotment. The status and presence of these species in the RFO area are discussed in the following section.

Pecos Bluntnose Shiner *(Notropis simus pecosensis)* _ Federal Threatened

Historically, the Pecos bluntnose shiner inhabited the river from Santa Rosa to near Carlsbad, New Mexico. Currently, the subspecies is restricted to the river from the Fort Sumner area southward locally to the vicinity of Artesia, and seasonally in Brantley Reservoir (NMDGF 1988; USFWS 1992). Routine fish community monitoring conducted by the USFWS in the river between Sumner Dam and Brantley Reservoir show the fish remains generally abundant, especially in light of cooperative efforts between the Bureau of Reclamation and the USFWS to more closely mimic natural flows in the Pecos River.

There are two designated critical habitat areas on the Pecos River within the RFO area. The first is a 64-mile reach beginning about ten miles south of Fort Sumner (Township 1 North), downstream to a point about twelve miles south of the DeBaca/Chaves County line (Township 5 South). The second reach is from Highway 31 east of Hagerman (Township 14 South), south to Highway 82 east of Artesia (Township 17 South). The allotment does not fall within these reaches.

Livestock grazing does not appear to be a threat to the bluntnose shiner based on a review of the literature. Nor was grazing identified in the Pecos Bluntnose Shiner Recovery Plan as having the potential to adversely affect water quality, and thus the bluntnose shiner (USFWS 1992).

Pecos Gambusia *(Gambusia nobilis)* _ Federal Endangered

The Pecos gambusia is endemic to the Pecos River Basin in southeastern New Mexico and western Texas. Historically, the species occurred as far north as the Pecos River near Fort Sumner, and south to Fort Stockton, Texas.

Recent records indicate, however, that its native range is restricted to sinkholes and springs and their outflows on the west side of the Pecos River in Chaves County. In spite of population declines, the species remains locally common in a few areas of suitable habitat. Populations on the BLNWR and the Salt Creek Wilderness Area constitute the key habitat of the species in the RFO area. On the refuge, the gambusia is primarily restricted to springs and sinkholes in the Lake St. Francis Research Natural Area.

Endangerment factors include the loss or alteration of habitat (e.g., periodic dewatering) and introduction of exotic fish species (e.g., mosquitofish). Potential impacts to habitat may also occur from surface disturbing activities at sinkholes or springs and their outflows.

Interior Least Tern *(Sterna antillarum athalassos)* _ Federal Endangered

The interior least tern nests on shorelines and sandbars of streams, rivers, lakes, and man-made water impoundments. Records of breeding terns in New Mexico are centered around BLNWR where the species has bred regularly since it was first recorded in 1949. BLNWR is considered "essential" tern breeding habitat in the state. Besides BLNWR, the only known nesting habitat in the RFO area is an alkali flat due north of the refuge on public lands. These are small populations with only a few nesting terns.

Sporadic observations of least terns have been recorded elsewhere in the Pecos River valley. The tern may occur on public lands in Chaves County along the river because suitable nesting habitat is found on sites that are sandy and relatively free of vegetation (i.e., alkali flats). Approximately 44 potential

nesting sites are found throughout the RFO area. Other potential habitat sites are saline, alkaline, or gypsiferous playas that occasionally hold water. However, ephemeral playas do not support fish, the main staple for terns.

Specific surveys for nesting least terns have been conducted in potential habitat along the Pecos River and playas by the New Mexico Natural Heritage Program under a Challenge Cost Share project. No other nesting terns have been found to date.

Pecos (Puzzle) Sunflower *(Helianthus paradoxus)* _ Federal Threatened

The Pecos sunflower is found along alkaline seeps and cienegas of semi_desert grasslands and short_grass plains (4,000_7,500 ft.). Plant populations are found both in water and where the water table is near the ground surface.

In the RFO area, the sunflower is found in only a few areas outside of the BLNWR. In 1994, a new population was found growing on the margins of Lea Lake and its outflow at Bottomless Lakes State Park. Lloyd's Draw, east of the Pecos River, has the only known Pecos sunflower population on BLM land, which only became evident following a prescribed fire. Potential habitat also occurs on BLM land within the Overflow Wetlands Wildlife Habitat Area.

Potential habitat for the sunflower occurs on the allotment as low lying areas where the water table is near the ground surface. The low lying areas are not necessarily along the existing river channel, but in old channel courses and oxbows. These areas are now invaded by saltcedar growing in dense stands, which may prevent the viability of the Pecos sunflower. Other potential sites include a few springs on the east side of the river. No Pecos sunflower populations have been found on the allotment to date. Endangerment factors include dewatering of riparian or wetland areas where the sunflower is found, surface disturbing activities, and excessive livestock grazing.

9. Range: The access road and well pad are located on a BLM grazing allotment #65007, permitted to Mark S. Cooper, P. O. Box 33, Roswell, NM 88202.

10. Visual Resources:

The proposed action is located in a scenic area along the Pecos River corridor designated VRM Class III. The setting presents a winter gray setting and in warm months, with foliage, a gray to gray-green color pattern.

11. Recreation:

The area around the proposed action site is primarily used by recreational visitors engaged in hunting, off-highway vehicle use and other recreational activities. Non-recreation visitors include oil and gas industrial workers and ranchers.

12. Cave/Karst:

While the proposed action is located in the *Medium Potential Karst Area*, no surface cave/karst features were observed in the immediate vicinity of the proposed actions.

13. Minority or Low-income Populations or Communities:

The proposed actions would not affect the minority or low-income populations or communities.

IV. ENVIRONMENTAL IMPACTS

A. Proposed Action Impacts:

The surface disturbance involved in the construction of the access road, well pad, and reserve pit would total about 3.6 acres of federal surface.

1. Air Quality:

Air quality would temporary be impacted with pollution from exhaust emissions, chemical odors, and dust that would be caused by the motorized equipment used to construct the access road, well pad, and by the drilling rig that will be used to drill the well. Dust dissemination would discontinue upon completion of the construction phase of the access road and well pad. Air pollution from the motorized equipment would discontinue at the completion of the drilling phase of the operations. The winds that frequent the southeastern part of New Mexico generally disperse the odors and emissions. The impacts to air quality would be greatly reduced as the construction and drilling phases are completed.

2. Soils:

The construction of the access road and well pad would physically disturb about 3.6 acres of topsoil and would expose the substratum soils. The exposed soils would be susceptible to wind blowing and water erosion. Surfacing the exposed soils on the access road and well pad would minimize these impacts. Construction of the reserve pit 4 feet below ground level would impact deeper soil horizons on the well pad. The impact to the soils would be remedied upon reclamation of the well pad when the stockpiled soil that was specifically conserved to establish a seed bed is spread over the well pad and vegetation re-establishes.

Additional soil impacts associated with lease development would occur when heavy precipitation causes water erosion damage. When water saturated segment(s) on the access road become impassable, vehicles may still be driven over the road. Consequently, deep tire ruts would develop. Where impassable segments are created from deep rutting, unauthorized drive-arounds may occur outside the designated travelway of the access road. Road constructions requirements and regular maintenance would alleviate potential impacts to the access road from water erosion damage.

3. Floodplain:

The floodplain may be affected or impacted by accidental drilling fluid spills or leaks during the drilling phase and production phase. Steel tanks will be used in lieu of reserve pits and emergency pits, because the well pad is in the Pecos River floodplain. Standard oilfield construction equipment consisting of; track-type tractors, motor graders, dump trucks, and water trucks would be used to construct the access road and well pad. A drilling rig would be used to drill the well. The steel tanks use in drilling a gas well are designed so that drilling fluids (mud) and produced fluids (e.g.: saltwater, oil, and/or condensate) are contained within the steel tanks and are not allowed to discharge out onto the floodplain. Production facilities will be located outside of the floodplain.

The impact from drilling fluid contamination is minimal since the use of steel tanks would prevent drilling fluids from entering out onto the floodplain. The impact from produced fluid is minimal since the production facilities will be located outside of the floodplain. If the well is a producer, produced fluids (e.g.: saltwater, oil, and/or condensate) could cause permanent damage to the floodplain in the event of a breech, overflow, or spill from steel tanks during the frilling phase. There is a remote possibility that accidental drilling fluid contamination of the floodplain could occur during the drilling phase. Steel tanks will be used in lieu of reserve pits and emergency pits. The steel tanks shall be constructed so as not to leak, break, or allow discharge of drilling fluids (muds) on the ground. The

holder shall dispose of drilling fluids (muds) and tailings at an authorized disposal site. No drilling fluids (muds) and/or tailings shall be dumped on location.

The use of steel tanks would protect the floodplain from the possibility of drilling fluid and production fluid contamination. The placement of production facilities outside of the floodplain would prevent contamination of the floodplain from spillage or leakage of produced fluids (e.g.: saltwater, oil, and/ or condensate).

4. Wetlands/Riparian Zones:

The riparian area in the vicinity of the well pad could be impacted by the re-entry because of the damage and removal of establishment of riparian species, primarily cottonwood trees and seep willow. Surface disturbance of the rehabilitated well pad would remove vegetation that became re-established on the old pad. Potential contaminants from drilling activity and machinery could adversely affect riparian vegetation growing in the vicinity of the pad either from direct contact or from contamination of groundwater. Runoff from the pad could wash or leach contaminants toward the Pecos River, potentially impacting additional riparian vegetation and aquatic resources. Minimizing pad size and clearing operations, use of steel tanks and locating production facilities out of the floodplain would mitigate potential impacts resulting from re-entry activities.

5. Vegetation:

The construction of the access road and well pad would remove about 3.6 acres of native vegetation. If it is a producing well, reclamation would not commence until the well is a depleted producer and plugged and abandoned. Vegetation recovery on the access road and well pad would depend on the life of the well. Native vegetation would encroach on the well pad over time with only high traffic areas remaining unvegetated. If drilled as a dry hole and plugged, reclamation of the access road and well pad would immediately follow. Vegetation impacts would be short-term when the access road and well pad re-vegetate within a few years, and the reclamation of the access road and well pad are successful.

6. Invasive & Noxious Weeds:

The construction of an access road, pipeline and/or well pad may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seeds could be carried to and from the project areas by construction equipment, the drilling rig and transport vehicles. The main mechanism for seed dispersion on the roads and well pads is by equipment and vehicles that were previously used and or driven across or through noxious weed infested areas. The potential for the dissemination of invasive and noxious weed seeds may be elevated by the use of construction equipment typically contracted out to companies that may be from other geographic areas in the region. Washing and decontaminating the equipment prior to transporting the equipment onto the construction areas would minimize this impact.

Impacts by noxious weeds will be minimized due to requirements for the company to eradicate the weeds upon discovery. Multiple applications may be required to effectively control the identified populations.

7. Ground Water Quality:

The use of a plastic-lined reserve pit would reduce or eliminate seepage of drilling fluid into the soil and eventually reaching groundwater. Spills or produced fluids (e.g., saltwater, oil, and/or condensate in the event of a breech, overflow, or spill from storage tanks) could result in contamination of the soils onsite, or offsite, and may potentially impact groundwater resources in the long term. The casing and cementing

requirements imposed on the proposed well would reduce or eliminate the potential for groundwater contamination from drilling muds and other surface sources.

8. Wildlife:

Wildlife species utilizing the Pecos River area would continue to be impacted by development of existing oil and gas leases. The magnitude of impacts from individual wells, and associated roads and pipelines, increases by the number of wells developed and in operating condition. Individual gas wells usually do not result in negative impacts to wildlife or wildlife habitat due to the small area of disturbance, in contrast to field or complete lease development, which is occurring in the area of interest. Some small wildlife species may be killed and their dens or nests destroyed during construction and operation of the well. The construction of the access road and well pad would cause fragmentation of wildlife habitat. The proper reclamation of the disturbed areas would eventually lessen the impacts to wildlife habitat. Activity in this developing area would continue to produce long-term negative impacts on wildlife populations and habitat from the operation and maintenance of producing wells, pipelines and access roads. Wildlife displacement from noise and visual intrusions would continue to occur within the area of interest.

Oil and gas lease development in the floodplain of the Pecos River would have negative, long-term cumulative impacts to wildlife habitat due to the magnitude and concentration of surface disturbances, such as oil and gas pads, pipelines, access roads, power lines, and associated human activity in the area. This impact would be partly mitigated by limiting public access to the area with gates.

The re-entry may potentially affect special status species and their habitat. The potential for affecting special status species, particularly aquatic species, is highest within the Pecos River floodplain. Because of the location of the re-entry, the potential impacts are high with respect to special status species. A determination of May Affect But Not Likely to Adversely Affect is made contingent upon the implementation of the design features for the protection of terrestrial and aquatic wildlife habitat.

9. Range:

There would be some minor disruption of livestock grazing in the pasture, specifically on the well pad, during the construction and drilling phase of the well. Vehicle traffic would increase in the area, which may lead to conflicts with livestock.

10. Visual Resources:

Facilities, such as produced water, condensate or oil storage tanks that rise above eight feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line. The construction of an access road, well pad and other ancillary facilities, other than facilities greater in height than eight feet, would slightly modify the existing area visual resources.

The Class III objective is to: Partially retain existing landscape character. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate a casual observer's view. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Facilities, such as condensate and produced water or oil storage tanks that rise above eight feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line.

Under visual resource Class III, the method for repeating the basic elements would be to remove strong vertical and horizontal contrast through use of low-profile facilities as reflected in the Roswell RMP (1997, p. AP1-4). Depending on the production nature of the well site, multiple low-profile condensate and/or oil or produced water tanks would be necessary to accommodate the project.

Through color manipulation, by painting well facilities to blend with the rolling to flat vegetative and/or landform setting with a gray-green color, the view is expected to favorably blend with the form, line, color and texture of the existing landscape. The flat color Slate Gray from the standard environmental colors also closely approximates the brownish color of the setting. All facilities, including the meter building, would be painted this color.

The construction of an access road and other ancillary facilities, other than facilities greater in height than eight feet, would slightly modify the existing area visual resources. To further implement visual goals of a Class III setting, the well pad and pits would be designed to reduce vegetative and soil disturbance with the pits either dug provided as steel pits, black, gray or brush brown in color. The access road, well pad, pit(s) and berm(s) would be similar to the texture and horizontal line found throughout the setting. This strategy would be generally acceptable to the various visitors and workers in this setting.

Cumulative adverse visual impacts can be avoided by gradually moving into a more appropriate vegetative/landform setting color scheme. Facilities with low-profile horizontal line and form would facilitate favorable blending as older facilities go out of production and are removed.

11. Recreation

Oil and gas activities would have little or no affect on the recreational opportunities in this area. Recreation activities could occur within this area and are limited to access from state or county roads or through state land.

12. Cave/Karst:

There should be no impact to cave entrances, or karst features within the areas of the proposed actions.

13. Minority or Low-income Populations or Communities:

The proposed actions would not impact the minority or low-income populations or communities.

B. Alternatives:

1. Relocation Alternative:

The alternative of changing the location involved in this action was not analyzed further because no other alternative location would have significantly fewer impacts than, or have a clear advantage over, the proposed location.

2. No Action Alternative:

The no action alternative would constitute denial of the application. This alternative would have no consequential results from the identified environmental impacts. There would, however, be an adverse economic impact to the applicant through the denial of the lessee's right to develop the mineral reserves or through increased costs of accessing those mineral reserves through other means. There have been no significant or unmitigatable impacts identified as a result of this analysis, which would warrant selection of the no action alternative.

C. Mitigation:

The Roswell Field Office; Well Drilling Requirements (Exhibit B) & floodplain "V" Shaped Barrier Diagram (Exhibit G), Conditions of Approval (Exhibit C), Permanent Resource Road Requirements (Exhibit D), Cattleguard Diagram A & B (Exhibit E), & Diagrams For Proper Culvert Installation (Exhibit F) and the special requirements derived from this EA, would be applied to this proposed action to minimize the surface disturbance and conserve the surrounding landscape.

D. Cumulative Impacts:

While it is likely that there will be no significant cumulative impact from the proposed action, continued oil and gas development, and other surface-disturbing activities in this area, may potentially have negative cumulative impacts on vegetation, soil, water, livestock, wildlife, and visual resources.

V. Consultation and Coordination

An onsite inspection was conducted on the access road and well pad on 2/12/03. In attendance were Mrs. Pat Perez, Regulatory Agent for Yates Petroleum Corporation and Richard Hill, Environmental Protection Specialist, BLM Roswell Field Office. Coordination and consultation has occurred with the applicant's agent. The comments and suggestions expressed during the onsite consultation have been incorporated into this EA.

Coordination and consultation has occurred with Roswell Field Office's Staff. The comments and suggestions expressed during the review of the proposed action and environmental assessment have been incorporated into this EA. Roswell Field Office's Staff at on-site; Joseph Navarro and Michael McGee.

Reviewed by:

_____ _____

Irene Gonzales, Realty Specialist Date

EXHIBIT B

WELL DRILLING REQUIREMENTS

OPERATORS NAME: Yates Petroleum Corporation LEASE NO.: NM-109419
WELL NAME & NO: Bobwhite "BBH" Deep Federal Com. #1
QUARTER/QUARTER & FOOTAGE: Lot D - 660' FSL & 750' FWL
LOCATION: Section 3, T. 6 S., R. 26 E., NMPM
COUNTY: Chaves County, New Mexico

I. GENERAL PROVISIONS:

A. The operator has the right of administrative review of these requirements pursuant to 43 CFR 3165.1(a).

B. The operator shall hereafter be identified as the holder in these requirements. The Authorized Officer is the person who approves the Well Drilling Requirements.

II. WELL PAD CONSTRUCTION REQUIREMENTS:

A. The BLM shall administer compliance and monitor construction of the access road and well pad. Notify **Richard G. Hill** at least **3** working days (72 Hours) prior to commencing construction of the access road and/or well pad. Roswell Field Office number **(505) 627-0247**.

B. Prior to commencing construction of the access road, well pad, or other associated developments, the holder shall provide the dirt contractor with **a copy of the approved APD signature page, a copy of the location map (EXHIBIT A), a copy of pages 1 & 2 from the Well Drilling Requirements (EXHIBIT B), and a copy of the Permanent Resource Road Requirements (EXHIBIT D).**

C. No topsoil on location. See Well Drilling Requirements - VI. Seeding Requirements - for reclamation of the well pad.

D. **Steel Tank Requirements: NO RESERVE PITS**

1. **The holder shall use steel tanks for drilling the well in lieu of reserve pits.** Steel tanks will help prevent the possibility of the drilling fluid leaching into the underground aquifers and reduce soil disturbance.

2. The steel tanks shall be constructed so as not to leak, break, or allow discharge of drilling muds. Under no circumstances will the steel tank be opened and allowed to drain drilling muds on the ground.

3. The steel tanks shall be equipped to deter entry by birds, bats, other wildlife.

4. The holder shall dispose of drilling muds and tailings at an authorized disposal site. No drilling muds and/or tailings shall be dumped on location.

E. **Federal Mineral Materials Pit Requirements:**

1. Caliche, gravel, or other related materials from new or existing pits on Federal mineral estate shall not be taken without prior approval from the authorized officer. Contact Jerry Dutchover at (505) 627 - 0236.

2. Payment for any Federal mineral materials that will be used to surface the access road and the well pad is required prior to removal of the mineral materials.

F. **Well Pad Surfacing Requirement:**

The well pad shall be surfaced with **6** inches of compacted caliche, gravel, or other approved surfacing material. The well pad shall be surfaced prior to drilling operations. **See Permanent Resource Road Requirements - EXHIBIT D - requirement #4, for road surfacing.**

G. **Cave Requirements:**

1. If, during any construction activities any sinkholes or cave openings are discovered, all construction activities shall immediately cease. Contact **Larry Bray** at **(505) 627-0250**.

2. The BLM Authorized Officer will, within 24 hours of notification in "A" above, conduct an on-the-ground field inspection for karst. At the field inspection the authorized field inspector will authorize or suggest mitigating measures to lessen the damage to the karst environment. A verbal order to proceed or stop the operation will be issued at that time.

III. DRILLING OPERATION REQUIREMENTS:

A. GENERAL DRILLING REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272, in sufficient time for a representative to witness:

A. Spudding B. Cementing casing: **5½** inch C. BOP tests

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

5. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

B. CASING:

1. The minimum required fill of cement behind the **5½** inch production casing is **cement shall extend upward a minimumof 500 feet above the uppermost perforation**.

C. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the **8⅝** inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

A. The results of the test shall be reported to the appropriate BLM office.
B. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
C. Testing must be done in a safe workman-like manner. Hard line connections shall be required.
D. Testing with the rig pumps to 1000 psi is approved.
E. BOPE shall be tested before drilling into the Wolfcamp formation.

D. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

F. Recording pit level indicator to indicate volume gains and losses.
G. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
H. Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

IV. DOWN HOLE ABANDONMENT REQUIREMENTS:

A. If the well is a dry hole and will be plugged, approval of the proposed plugging program may be obtained orally. However, oral approval must be confirmed in writing by immediately filing a Sundry Notice And Report On Wells (Form 3160-5) **"Notice of Intention to Abandon"**, and submitting an original and five (5) copies to the Roswell Field Office. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where plugs are to be placed, type of plug, type of plugging mud, etc..

B. If the well is not drilled, please notify the BLM so that an official release can be approved.

V. SURFACE RECLAMATION/RESTORATION REQUIREMENTS:

A. When the well is abandoned the **"Notice of Intention to Abandon"** (Form 3160-5) could also be used by the holder as the initial report for the surface reclamation/restoration of the access road and well pad. Upon receipt of the "NOI" the Authorized Officer shall provide the holder with the specific requirements for the reclamation/restoration of the access road and well pad.

B. **Subsequent Report Of Abandonment:** The holder shall submit a second report on Form 3160-5, Sundry Notice and Report On Wells, the original and five (5) copies to the Roswell Field Office, pertaining to the reclamation/restoration of the access road and well pad. The holder shall demonstrate that the surface reclamation/restoration requirements have been complied with. The holder shall specify that the reclamation work accomplished the restoration of the disturbed areas to as near the original surface condition the land was in prior to construction of the access road and well pad.

C. **Final Abandonment Notice:** The holder shall submit a third report on Form 3160-5, Sundry Notice and Report On Wells, the original and five (5) copies to the Roswell Field Office, that will ascertain that all surface reclamation/restoration requirements have finally been completed and that the access road and well pad are ready for final inspection. The holder shall specify that the surface has been reclaimed in accordance with federal regulations and request final approval of the access road and well pad.

D. The holder shall comply with all the surface reclamation/restoration required by the Authorized Officer pertaining to the reclamation/restoration of the access road and well pad. Liability under bond shall be retained until surface reclamation/restoration of the access road and well pad has been completed to the satisfaction of the Authorized Officer.

VI. SEEDING REQUIREMENTS:

A. The stockpile of topsoil shall be spread over the well pad to cultivate a seed bed. The holder shall not mix the topsoil with the reserve pit area soil. The mixing of the soils will render the conservation of the topsoil for reclamation purposes pointless, if the topsoil is contaminated with the reserve pit mud soils.

B. The reclaimed area(s) shall be seeded with the seed mixture that was determined by the Roswell Field Office for the Desired Plant Community on this well site.

C. The same seed mixture shall be used on the reclaimed access road; **See PERMANENT RESOURCE ROAD REQUIREMENT #12.**

D. The planting of the seed shall be done in accordance with the following seeding requirements:

1. **The access road and well pad shall be ripped a minimum of 16 inches deep**. The topsoil soil shall be plowed under with soil turning equipment and the plowed surface shall be disked before seeding. Seed shall be planted using a drill equipped planter with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first, the holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre noted below are to be doubled.

2. The holder shall seed all the disturbed areas with the DPC seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed per acre, (Pounds of pure live seed per acre: pounds of seed X percent purity X percent germination = pounds pure live seed). There shall be no primary or secondary noxious weeds in the seed mixture.

In accordance with State law(s) the seed should be tested for purity and viability within nine (9) months prior to sell. Commercial seed shall be either certified or registered seed. The seed mixture container shall be tagged in accordance with State law(s) and the certified seed tag shall be made available for inspection by the Authorized Officer.

3. Desired Plant Community seed mixture to be planted in pounds of pure live seed per acre:

Common name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Giant Sacaton	*(Sporobolus giganteus)*	3.75 Lbs.
Vine Mesquite	*(Panicum obtusum)*	0.50 Lb.
Tobosa var. Viva	*(Pleuraphis mutica*)	2.75 Lbs.
Plains bristlegrass	*(Setaria macrostachya)*	0.75 Lb.
Four-wing saltbush	*(Atriplex canescens)*	0.25 Lb.
Desert of Scarlet Globemallow	*(Sphaeralcea ambigua)* or *(S. coccinia)*	0.25 Lb.
Annual Sunflower	*(Helianthus annuus)*	0.75 Lb.
Total Pounds Pure Live Seed Per Acre		9.00 Lbs.

If one Species is not available, increase ALL others Proportionately. Certified Weed Free Seed.

E. The recommended time to seed is from June 15th through September 15th. The optimum seeding time is in mid-July. Successive seeding should be done either late in the fall (Sept. 15th - Nov. 15th, before freeze up) or early as possible the following spring to take advantage of available ground moisture. However, the holder may seed immediately after completing surface abandonment requirements.

F. The seeding of the disturbed areas shall be repeated until a vegetation thicket is established on the access road and well pad. The Authorized Officer shall make the determination when the revegetation growth on the disturbed areas is satisfactory.

G. The holder shall be responsible for the establishment of vegetation on the access road and well pad. Evaluation of vegetation growth will not be made before the completion of the first growing season after seeding. The Authorized Officer reserves the right to require reseeding at a specific time if seed does not germinate after one growing season. Waiver of this requirement would be considered if diligent attempts to revegetate the disturbed areas have failed and the Authorized Officer determines that further attempts to replant the access road and well pad is futile.

H. Contact Richard G. Hill at (505) 627-0247 to witness the seeding operations, two (2) days prior to seeding the disturbed areas.

VII. Invasive and Noxious Weeds Requirement:

A. The holder shall be held responsible should the establishment of noxious weeds began to grow on the access road and well pad. Evaluation of growth of the noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land resulting from these actions, which include the roads, pads and associated pipelines and on adjacent land affected by the establishment of weeds due to this action.

B. The holder shall insure that the equipment and/or vehicles that will be used to construct the access road and/or well pad are not polluted with invasive and noxious weed seeds. Transporting of invasive and noxious weed seeds could occur if the equipment and/or vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds and the probability that the equipment and/or vehicles are carriers of noxious weed seeds from the conduct of previous projects in noxious weed infested areas, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

VIII. ON LEASE - WELL REQUIREMENTS:

A. The holder shall post signs identifying the location permitted herein with the requirements contained in Onshore Oil and Gas Order #1 and 43 CFR 3162.6.

B. The following data is required on the well sign that shall be posted in a conspicuous place on the well pad. **The communitization agreement number shall be posted on the well sign.** The sign shall be kept up with current identification and shall be legible for as long as the well is in existence:

Operator Name: Yates Petroleum Corporation
Well Name & No.: Bobwhite "BBH" Deep Federal Com. #1
Lease No.: NM-109419
Footage: 660' FSL & 750' FWL
Location: Section 3, T. 6 S., R. 26 E.

C. UPON ABANDONMENT OF THE WELL, THE SAME INFORMATION SHALL BE INSCRIBED ON THE DRY HOLE MARKER WITH A BEADED WELD.

D. The approval of the APD does not in any way imply or grant approval of any on-lease, off-lease, or off-unit action(s). It is the responsibility of the holder to obtain other approval(s) such as rights-of-way from the Roswell Field Office or other agencies, including private surface landowner(s).

E. All vehicles, including caterpillar track-type tractors, motor graders, off-highway trucks and any other type of motorized equipment that is used in the construction of the access road and well pad shall be confined to the area(s) herein approved. The drilling rig that is used to drill the well shall also be confined to the approved area(s).

F. **Containment Structure Requirement:**

1. A containment structure or earthen dike shall be constructed and maintained around all storage facilities/batteries. The containment structure or earthen dike shall surround the storage facilities/batteries.

2. The containment structure or earthen dike shall be constructed two (2) feet high around the facilities/batteries (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum).

3. The perimeter of the containment structure or earthen dike can be constructed substantial larger for greater holding capacity of the contents of the largest tank.

3. The containment structure or earthen dike shall be constructed so that in case of a spill the structure can contain the entire contents of the largest tank, plus 24 hour production, within the containment structure or earthen dike, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

5. A containment structure or earthen dike shall be constructed and maintained around the entire well pad facility. The containment structure or earthen dike shall surround the well pad facility. The containment structure or earthen dike shall be constructed two (2) feet high around the well pad facility (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum).

G. **Well Completion Requirement:**

If the well is completed, all areas of the well pad not necessary for operations shall be reclaimed to resemble the original contours of the surrounding terrain. Cut-and-fill slopes shall be re-contoured and reduced to a slope of 3:1 or less.

H. **Painting Requirement:**

All above-ground structures (e.g.: meter houses, tanks, above ground pipelines, and related appurtenance, etc.) not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for painting all the well facilities is ***Slate Gray***, Munsell Soil Color Chart Number ***5Y 6/1*****.**

I. **Fence Requirement:**

The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. On private surface the holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

J. **Open-vent Exhaust Stack Requirements:**

1. All open-vent exhaust stacks associated with heater-treater, separators and dehydrator units shall be modified to prevent birds and bats from entering them and to the extent practical to discourage perching and nesting.

2. New production equipment installed on federal leases after November 1st, 1993, shall have the open-vent exhaust stacks constructed to prevent the entry of birds and bats and to the extent practical, to discourage perching, and nesting.

IX. SPECIAL REQUIREMENT(S):

A. Low-profile facilities no greater than eight-feet-high shall be used. If necessary, multiple tanks shall be used. The facilities shall be located outside of the floodplains.

B. **FLOODPLAIN DEVELOPMENT REQUIREMENTS:**

1. If a threat of flooding by the Pecos River occurs during drilling operations, the Roswell Field Office Area Manager shall issue a shut-in order. Toxic substances and, possibly, drilling equipment shall be removed from the floodplain.

2. The drilling pad shall be elevated at least 6 inches above ground level and surfaced according to surfacing stipulations prior to drilling operations.

3. All riparian habitat shall be protected according to instructions provided by the Authorized Officer. Trees shall not be cut down unless authorized.

4. Pits containing oil, tank bottoms or other hydrocarbons, salt water, or any toxic substances shall not be allowed in the floodplain.

5. Provisions for containing salt water flow must be made prior to beginning drilling, without resorting to reserve pits constructed in the ground. Metal tanks or tank trucks must be in place to collect salt water and overflow of salt water. No salt water or condensation storage facilities shall be allowed in the floodplain.

6. Production facilities shall be located outside the floodplain. The floodplain and well location is shown in **Exhibit A-2**.

7. All pipelines and flowlines from the wellhead to production facilities shall be buried.

8. Three steel posts shall be set in concrete. Horizontal steel cross bars will connect the posts. Heavy gauge chain link fencing will be welded or bolted to the post and cross bars. The V must point upstream or in the direction specified. **See Exhibit G**.

9. Chemical toilets shall be used instead of latrines.

EXHIBIT C

CONDITIONS OF APPROVAL

OPERATOR: Yates Petroleum Corporation
LEASE NO: NM-109419
WELL NAME & NO.: Bobwhite "BBH" Deep Federal Com. #1
LOCATION: Section 3 T. 6 S., R. 26 E., N.M.P.M.
QUARTER/QUARTER & FOOTAGE: Lot D - 660' FSL & 750' FWL
COUNTY: Chaves County, New Mexico

GENERAL CONDITIONS OF APPROVAL:

1. The **operator** shall hereafter be identified as the **holder** in these requirements. The Authorized Officer is the person who approves the Conditions Of Approval.

2. The holder shall indemnify the United States against any liability for damage to life or property arising from occupancy or use of public land under this authorization.

3. The holder shall have surface use approval prior to any construction work on change(s) or modification(s) to the access road and/or well pad. The holder shall submit (Form 3l60-5), Sundry Notice and Report On Wells, an original plus one (1) copy to the Roswell Field Office, stating the basis for any changes to previously approved plans. Prior to any revised construction the holder shall have an approved Sundry Notice and Report On Wells or written authorization to proceed with the change in plans ratified by the Authorized Officer.

4. **Weed Control:**

The holder shall be responsible for weed control on disturbed areas within the limits of the site. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

5. **Hazardous Substances:**

a. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act Of 1976, as amended (15 U.S.C. 2601, *et. seg.*) with regard to any toxic substances that are used, generated by or stored on the project/pipeline route or on facilities authorized. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally,

any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

b. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substances or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seg.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seg.*) on this project/pipeline (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline). This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.

6. **Undesirable Events:**

If, during any phase of the construction, operation, maintenance, or termination of the authorization, any oil or other pollutants, should be discharged, and impacting Federal land, the control and total removal, disposal, and cleaning up of such oil or other pollutants, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages to Federal land resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

7. **Archaeological, Paleontology, and Historical Sites:**

a. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

b. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of the project work, the holder shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The holder or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes. Any unauthorized collection or disturbance of cultural resources may result in a shutdown order by the Authorized Officer.

8. **Sanitation:**

The holder shall be responsible for maintaining the site in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

9. **Open-top Tanks:** Any open-top tank containing oil and/or toxic fluids shall be covered with netting or equipped to prevent birds, bats, and other wildlife from entering the open-top tank.

10. **Other:** None

EXHIBIT D

PERMANENT RESOURCE ROAD REQUIREMENTS

Operator: Yates Petroleum Corporation
BLM Serial Number: NM-109419
Well Name & NO.: Bobwhite "BBH" Deep Federal Com. #1
Location: Section 3, T. 6 S., R. 26 E.
660' FSL & 750' FWL, Chaves County, N.M.

The holder agrees to comply with the following requirements:

1. GENERAL REQUIREMENTS:

A. The **operator** shall hereafter be identified as the **holder** in these requirements. The Authorized Officer is the person who approves the Permanent Resource Road Requirements.

B. The holder shall minimize any disturbance to structures on public domain surface. Damages caused to any structure during road construction operations shall be promptly repaired by the holder. Functional use of any structure shall be maintained at all times. The holder shall make a documented good-faith effort to contact the owner prior to disturbing any structure.

C. When necessary to pass through an existing fence line, the fence shall be braced on both sides of the passageway prior to cutting and the fence shall be promptly repaired to at least it's former state or to a higher standard than it was previously constructed.

D. A professional engineer shall design the access road if the road grade exceeds 10 percent slope.

2. INGRESS AND EGRESS:

The access road shall be constructed to access the well pad on the **Southeast** corner of the well pad to comply with the planned access road route.

3. ROAD TRAVELWAY WIDTH:

The travelway of the road shall be constructed **14** feet wide. The maximum width of surface disturbance shall not exceed **30** feet of road construction. The specified travelway width is 14 feet for all road travelway surfaces unless the Authorized Officer approves a different width.

4. SURFACING:

Beginning from the dedicated road, the entire length of the access road travelway shall be surfaced prior to drilling operations.

The access road travelway shall be surfaced with caliche or gravel material. If other surfacing material is used, the new type of material shall be approved by the Authorized Officer. The travelway of the road shall be surfaced with **caliche** material. The caliche material shall be compacted to a minimum thickness of **6** inches for the entire length of the travelway surface on the access road. The width of surfacing shall not be less than 14 feet of travelway surface. Prior to using any mineral materials from an existing federal pit, authorization must first be obtained from the Authorized Officer.

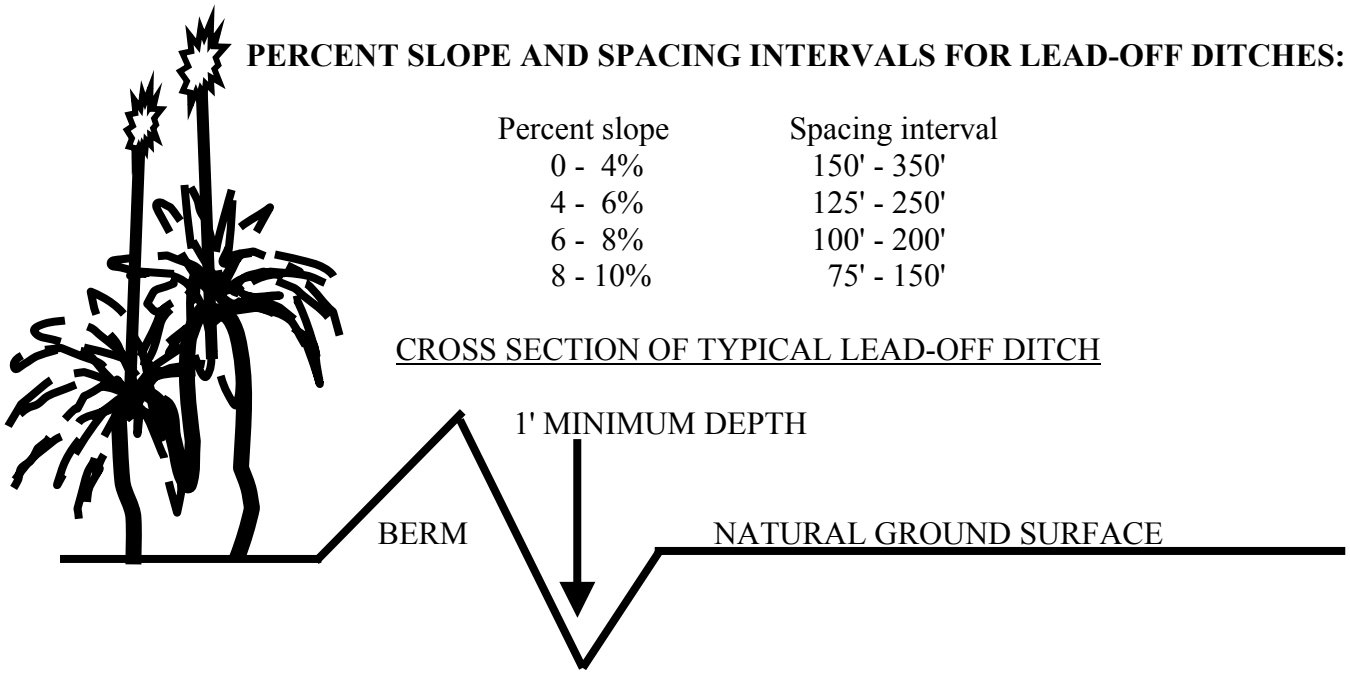
5. CROWNING AND DITCHING:

Crowning with materials on site and ditching on one side of the road, on the uphill side, shall be required. The road cross section shall conform to the cross section diagrams in Figure 1 (attached page 6). Where conditions dictate, ditching is required on both sides of the road. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road).

6. DRAINAGE:

A. Drainage control shall be ensured over the entire road through the construction of ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings.

a. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):



PERCENT SLOPE AND SPACING INTERVALS FOR LEAD-OFF DITCHES:

Percent slope	Spacing interval
0 - 4%	150' - 350'
4 - 6%	125' - 250'
6 - 8%	100' - 200'
8 - 10%	75' - 150'

CROSS SECTION OF TYPICAL LEAD-OFF DITCH

C. A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

D. On road slopes exceeding 2%, water flow shall drain water into an adjacent lead-off ditch. Water flow drainage location and spacing shall be determined by the following formula:

FORMULA FOR SPACING INTERVAL OF LEAD-OFF DITCHES:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

Ex. 4% slope: spacing interval $= \frac{400}{4} + 100 = 200$ feet

7. CULVERT INSTALLATION:

Culverts are required on this road.

ONE (1) CULVERT SHALL BE INSTALLED AT THE DEEP WATERWAY CHANNEL FLOW CROSSING IN THE NE¼NW¼ OF SECTION 10 - T. 6 S. - R. 26 E. (SEE EXHIBIT A - LOCATION MAP).

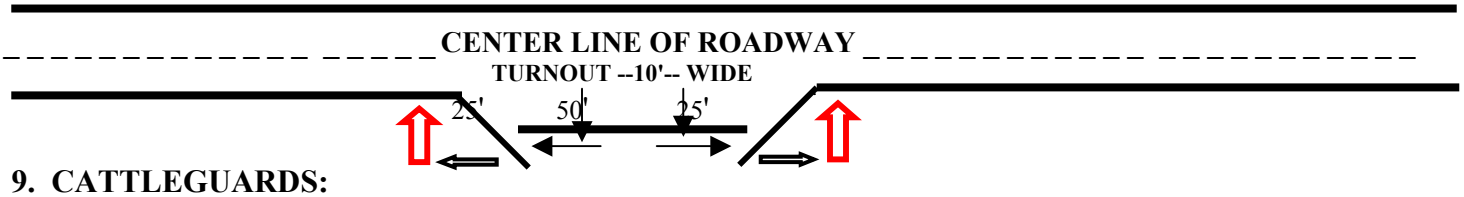
Culvert pipes shall be used where ravines, arroyo gullies, and deep waterway channel flows are crossed by the access road construction route. The culvert(s) shall not be less than 18 inches in diameter (minimum 18 inch culvert). The location for the culvert installation is designated on the attached map - **EXHIBIT A**. (A culvert pipe installation diagram shall be attached to this requirement when a culvert is required to be installed, **see EXHIBIT - F**).

8. TURNOUTS:

No Turnouts Are Required On This Road.

Vehicle turnouts shall be constructed on all single lane roads (unless the Authorized Officer determines that the turnouts are not required). Turnouts shall be intervisible and shall be constructed on all blind curves with additional turnouts as needed to keep spacing below 1000 feet. Turnouts shall conform to the following diagram:

STANDARD TURNOUT - PLAN VIEW



9. CATTLEGUARDS:

A cattleguard installation diagram shall be attached to this stipulation when a cattleguard is required to be installed - see EXHIBIT E - DIAGRAM A & B).

ONE (1) CATTLEGUARD SHALL BE INSTALLED AT THE FENCE CROSSING IN THE SE¼ CORNER OF LOT D IN SECTION 3 - T. 6 S. - R. 26 E. (SEE EXHIBIT A - LOCATION MAP).

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads, (exceeding H-20 loading,) are anticipated. (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

The existing cattleguard(s) on the access road shall be replaced if they are damaged from heavy vehicular traffic use and the Authorized Officer determines that a new cattleguard shall be installed where the existing in place cattleguard(s) have deteriorated beyond practical use. The holder shall be held responsible for the condition of the existing in place cattleguard(s) that are utilized for vehicular traffic use on lease operations by the holder.

10. MAINTENANCE:

A. The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, cattleguard maintenance, surfacing, and weed control.

B. The holder shall cooperate with other authorized users in maintenance of the road(s). Failure of the holder to share maintenance costs in dollars, equipment, materials, and manpower proportionate to the holders use with other authorized users may be adequate grounds to terminate the road use. The determination as to whether maintenance expenditures have been withheld by the holder and the decision to terminate the road use shall be at the discretion of the Authorized Officer. Upon request, the Authorized Officer shall be provided with copies of any maintenance agreements entered into by the holder.

11. PUBLIC ACCESS:

A Public access on this road shall not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public land shall not be locked or closed to public use unless closure is absolutely necessary and is authorized in writing by the Authorized Officer.

12. ROAD REHABILITATION REQUIREMENTS:

A. **The access road shall be ripped a minimum of 16 inches deep.** The surface material on the road may be removed and re-used in other approved area(s). Surfacing material left in place shall be plowed under with soil turning equipment and the plowed surface shall be disked before seeding. All culverts and other road structures shall be removed. All over-burden material shall be replaced in the cut areas, ditches, lead-off ditches, and any other excavated earthwork shall be back filled. The road shall be recontoured to as near it's original topography, as possible.

B. An earthen berm shall be constructed at the entrance of the road to prevent vehicular traffic on the reclaimed road.

C. The reclaimed road shall be seeded with the following **DPC seed mixture** (the Roswell Field Office has determined the Desired Plant Community seed mixture for the reclaimed area(s)):

SEE EXHIBIT B - WELL DRILLING REQUIREMENTS - VI. SEEDING REQUIREMENTS - FOR THE DESIRED PLANT COMMUNITY SEED MIXTURE THAT SHALL BE USED ON THE RECLAIMED ACCESS ROAD.

D. The seed and any fertilizer involved shall be broadcast over the road bed with a spreader, than harrowed to cover the seed. Use of a seed drill planter to plant is acceptable. Appropriate measures shall be taken to ensure that the seed/fertilizer mixture is evenly and uniformly applied. There shall be no primary or secondary noxious weeds in the seed mixture. In accordance with State law(s) the seed should be tested for purity and viability within nine (9) months prior to sell. Commercial seed shall be either certified or registered and the seed mixture container shall be tagged in accordance with State law(s). The seed mixture tag shall be made available to the Authorized Officer for inspection. The seeding shall be repeated until a satisfactory vegetation thicket is established and this determination shall be made by the Authorized Officer. Evaluation of plant growth will not be made before the first growing season.

E. Seeding shall be done between June 15th through September 15th. However, the holder can seed the road immediately after preparing the road bed.

F. The Authorized Officer reserves the right to require reseeding at a specific time if seed does not germinate after one (1) growing season. Waiver of this requirement would be considered if diligent attempts to revegetate the road has repeatedly failed and the Authorized Officer determines that further attempts to revegetate the road would be futile.

G. **Contact Richard G. Hill at (505) 627-0247 to witness the seeding operations two (2) days before the start of the seeding process.**

13. SPECIAL REQUIREMENT(S): None